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I am pleased to submit the 1999 Fresno County Agricultural Crop and Livestock Report. This annual compilation presents statistical data pertaining to the acreage, yield, and gross value of Fresno County agricultural products.

The total gross production value of Fresno County agricultural commodities in 1999 was \$3,565,510,600. This represents a 9.45 percent increase from the 1998 gross production value. The December 1998 freeze resulted in a \$78.5 million loss to the citrus growers in 1999. During the month of April, fruit, nut, grape, and vegetable growers also suffered losses as a result of hail and freezing temperatures.

It must be emphasized that the values presented in this report reflect gross values only, and do not in any manner reflect net income or loss to producers.

Agriculture continues as the major industry in Fresno County and is a driving force in the county's economy. Every dollar received by Fresno County producers results in the economic extension benefit of three and one-half dollars to the total economy of the county.

I sincerely appreciate the professional and dedicated work performed by Deputy Agricultural Commissioner/Sealer Dennis C. Plann, Supervising Agricultural/Standards Specialist Bruce Clayton, Agricultural/Standards Specialists Scotti Walker and Katherine C. de Contreras, Seasonal Agricultural/Standards Specialist Cézanne Baker, as well as the rest of my staff at the Department of Agriculture for the preparation of this report.

My thanks to the many individuals, related agencies, and members of the agricultural industry for their contributions to the compilation of this report.

Sincerely,

Jerry Prieto, Jr.
Agricultural Commissioner/Sealer

*"A treasure lies hidden in that earth;
Where, I don't know, but in the end you'll
arrive at
The right place, given some guts and toil.
When you've finished harvesting turn over,
your land,
Break it up, dig it, plough it, don't allow
One inch of it to escape your hand."*

La Fontaine

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This report is also available at our internet site:
<http://www.fresno.ca.gov/4010/agwelcm.htm>

FRESNO COUNTY'S 10 LEADING CROPS

Crop	1999 Rank	1999 Dollar Value	1998 Rank	1989 Rank	1979 Rank
GRAPES	1	\$ 605,214,000	1	1	1
POULTRY	2	523,288,000	2	*	*
COTTON	3	332,472,000	3	2	2
TOMATOES	4	312,835,000	4	3	4
MILK	5	222,767,000	5	4	5
GARLIC	6	175,355,000	12	16	25
CATTLE AND CALVES	7	141,045,000	8	5	3
ALMONDS	8	112,294,000	7	14	9
PLUMS	9	101,346,000	11	9	10
HEAD LETTUCE	10	<u>98,014,000</u>	10	12	18
TOP TEN TOTAL		\$2,624,630,000			

* Not previously combined for ranking purposes

1999 Highlights in Retrospect

January:

Peach, plum, nectarine and almond trees were pruned. Grapevines were pruned and tied and stakes were replaced. Tree fruit and almond growers applied dormant sprays to control insects. The cotton plowdown was complete and growers started to form beds for spring planting. Sugar beet fields were treated to control aphids. Lettuce and broccoli fields were thinned and weeded. Strawberry growers laid down plastic under the plants and cut the tops to stimulate new growth. Napa cabbage, bok choy, green onions and turnips were harvested.

February:

Peach, plum, nectarine, apricot and almond orchards were in bloom. Bee hives were placed in almond and plum orchards to improve pollination. Granny Smith apples were packed out of cold storage. Fig trees were pruned. Lettuce fields were thinned, weeded, and sprayed to control aphid and mildew. Growers planted eggplant and market tomatoes under hot caps. Processing tomato plants had just started to emerge from their beds. Rains during the month improved the quality of rangeland grasses. Napa cabbage, bok choy, green onions, mustard greens, chard, carrots, and turnips were harvested.

March:

Pomegranates, kiwifruit, grapes, apples, and stone fruit were leafing out. Cherries were in bloom and buds on walnut trees had started to push. Seed alfalfa fields were mowed. Cotton growers were waiting for warmer weather before starting to plant. Growers had started to plant long beans and sweet corn. The navel orange harvest slowed as packers searched for packable fruit. Strawberry plants were in bloom. Asparagus, napa cabbage, bok choy, green onions, mustard greens, chard, carrots, and turnips were harvested.

April:

Peach, plum, apricot, and nectarine fruit was thinned. Growers sprayed nectarine trees to limit thrip damage and almonds to protect the blooms from fungal problems. Walnut and fig trees were leafing out. High winds early in the month blew over almond trees. Cold temperatures caused damage to stone fruit, almonds, grapes and vegetables. Rice growers were getting ready to plant. Cotton planting started near the middle of the month. The spring lettuce harvest began. Melons were planted. The orange bloom was declared. Asparagus, napa cabbage, bok choy, green onions, mustard greens, chard, carrots, sugar peas, snap peas, and turnips were harvested.

May:

Peach, plum, and nectarine orchards were thinned, irrigated, and treated to control weeds. Grape growers applied fungicides to control powdery mildew. The peach, nectarine, apricot and cherry harvests started. Cotton fields were cultivated; seedlings grew slowly as a result of cool weather. Oat hay was cut and baled. Growers started to flood rice fields. The spring lettuce harvest finished. Sweet potatoes, yams, corn, and melons were planted. Bee hives were moved out of almond and citrus orchards and into seed alfalfa fields. Asparagus, artichokes, green cabbage, beets, radishes, broccoli, cilantro, bok choy, green onions, gailon, mustard greens, chard, carrots, turnips, snap peas, sugar pea leaf tips, fava beans, and basil were harvested.

June:

Rain and hail storms on Wednesday, June 2, caused over 4.6 million dollars in damage to crops in the Sanger, Easton, and Clovis areas of Fresno County. Grape leaves were harvested. Pomegranates were blooming. Brown Turkey and Mission figs had started to develop color. Rice fields were flooded, planted, and treated for weeds. Alfalfa hay was cut, raked, windrowed, and baled. Valencia oranges were packed. Fresh and processing garlic fields were harvested and less mature fields were treated for rust. Artichokes, green beans, basil, dill, Thai broccoli, peaches, plums, nectarines, apricots, cherries, tomatoes, peppers, parsley, cucumbers, corn, cilantro, bok choy, onions, gailon, mustard greens, mushrooms, chard, carrots, radishes, turnip greens, snap peas, strawberries, blackber

July:

The grape harvest started and Ginger Gold apples were packed. Nectarines were treated to control thrip. Cotton fields were in bloom and earlier planted fields had started to set bolls. Black-eyed beans were drying for harvest. The safflower harvest started. Wheat and barley were harvested and in some fields the stubble was burned. The processing tomato harvest was in full swing. Strawberry fields were cultivated and prepared for new plantings. Cantaloupes, watermelons, green beans, basil, bittermelon, cilantro, cabbage, dill, eggplant, horseradish, peaches, plums, nectarines, tomatoes, peppers, parsley, cucumbers, corn, bok choy, onions, gailon, garlic, mustard greens, mushrooms, chard, carrots, radishes, turnip greens, snap peas, strawberries, blackberries, blueberries, squash, you choy, and yam leaves were harvested.

August:

Grape vineyard floors were prepared for the upcoming wine and raisin harvests. The almond harvest started. Asian pears were harvested. Cotton fields were weeded, irrigated, thinned, and sprayed to control aphids, leafhoppers, lygus, and army worms. Garbanzo beans, safflower, and sugar beets were harvested. Most rice fields had been drained. Planting started for the fall head lettuce crop. Citrus growers cultivated their groves and sprayed to control weeds and red scale. Cantaloupes, green beans, long beans, basil, bittermelon, cilantro, chayote, dill, eggplant, grapes, garlic, horseradish, okra, peaches, plums, nectarines, tomatoes, peppers, parsley, cucumbers, corn, bok choy, onions, gailon, mustard greens, mushrooms, chard, radishes, sinqua, turnip greens, snap peas, squash, you choy, and yam leaves were harvested.

September:

The raisin and grape harvests started. Pomegranates, walnuts, figs, and pistachios were harvested. Rice had started to form seed heads. Cotton defoliation began in the latter half of the month. The seed alfalfa harvest slowed. Small grain and winter forage was planted. Strawberry growers were weeding and irrigating their fields; plants were starting to bloom. Fall lettuce and broccoli were sprayed to control aphids and worms. Olive fruit had started to size. Growers fumigated ground for future orange plantings. Cantaloupes, green beans, long beans, basil, bittermelon, cilantro, chayote, chives, dill, eggplant, grapes, garlic, horseradish, lemon grass, okra, opo, peaches, plums, nectarines, strawberries, tomatoes, peppers, parsley, cucumbers, corn, bok choy, onions, gailon, mustard greens, mushrooms, chard, radishes, sinqua, turnip greens, snap peas, squash, you choy and yam leaves were harvested.

October:

The cotton harvest was in full swing with only a few fields were still being defoliated. Corn stubble was disced and leveled. The rice harvest finished. Quince were harvested. Field corn, silage corn, sugar beets, dry beans and black-eyed beans were also harvested. Stone fruit growers fumigated open ground in preparation for planting new orchards. Olives were harvested. The garlic harvest was nearly finished. Lettuce fields were irrigated and fertilized. The fall lettuce and broccoli harvests started. Cantaloupes, green beans, long beans, basil, bittermelon, chayote, eggplant, grapes, horseradish, lemon grass, mint, okra, opo, pumpkins, strawberries, sugar peas, snap peas, sugar cane, sweet potatoes, tomatoes, peppers, parsley, cucumbers, corn, cilantro, bok choy, onions, gailon, mustard greens, mushrooms, sinqua, squash, you choy, yams, and yam leaves were also harvested.

November:

Grape growers pruned vines, cultivated to control weeds, applied soil amendments and planted cover crops. A few table grapes were still being harvested. Almond and stone fruit trees were being pruned. The cotton harvest continued; growers worked to meet plowdown requirements. Spring lettuce, onions, and garlic were planted. The navel orange harvest started. Broccoli, green beans, bok choy, bittermelon, cabbage, cilantro, chayote, cucumbers, corn, dill, eggplant, garlic, lemon grass, mint, moqua, mushrooms, parsley, sugar peas, snap peas, sugar cane, pumpkins, onions, opo, peppers, radishes, squash, sweet potatoes, tomatoes, yam leaves, and yams were harvested.

December:

Stone fruit and nut growers pruned and topped and then shredded the brush. The cotton harvest finished. Growers were shredding and plowing under cotton stalks. Small grain and winter forage fields were irrigated. Alfalfa hay was cut, raked, windrowed, and baled; some fields had started to enter dormancy. Processing tomato fields were being bedded up. Broccoli, basil, bok choy, beets, cabbage, cauliflower, cilantro, chickory, daikon, dill, gailon, turnip greens, kohlrabi, kale, lemon grass, mint, mushrooms, onions, radishes, squash, sugar cane, tomatoes, and you choy were harvested.

FIELD CROPS: Total gross returns for all field crops increased by \$19,084,000, from \$466,556,000 to \$485,640,000, and plantings were down 61,860 acres to 1,408,940 acres. Cotton, the county's third most valuable crop, increased in value by 7.86 percent, from \$308,231,000 to \$332,472,000. Acreage for acala varieties of upland cotton was down 55,000 acres while pima plantings increased 6,900 acres and non-acala upland cotton acreage increased 162 percent. The barley crop was down 3,270 acres and the gross returns decreased 44 percent or \$697,000. The size of the corn grain crop decreased 1,800 acres while the silage corn production was up 2,200 acres. The value of the rice crop nearly doubled as a result of increases in price, from \$172 to \$245 per ton, and also in yield, from 2.62 to 3.53 tons per acre. Gross returns for safflower were up 98 percent in spite of a \$102 per ton decrease in the amount paid to growers.

SEED CROPS: Total gross returns for seed crops increased by 30.5 percent, from \$33,202,000 to \$43,332,000. Certified alfalfa seed yields were up 130 pounds per acre and the crop value increased 38.8 percent or \$8,984,000. Certified cotton seed plantings increased 2,040 acres and the crop value was up \$312,000. Certified wheat seed plantings were down 1,070 acres and decreased in value by \$284,000.

VEGETABLE CROPS: The total gross returns for all vegetable crops increased \$190,708,000, from \$691,940,000 to \$882,648,000. Production per acre was down for most crops. Asparagus, bell peppers, broccoli and eggplant were all up in value. The value of the head lettuce crop decreased \$14,910,000, while leaf lettuce was up \$6,884,000. Returns to cantaloupe growers increased 18.02 percent, while the value of mixed melons was up \$1,983,000 and watermelons increased in value \$3,905,000. Sweet corn plantings decreased 4,300 acres and the crop value was down \$10,056,000. Increases in acreage, yield and price per ton all contributed to a \$6,034,000 increase in the value of oriental vegetables. Tomatoes, fourth on the county's top ten list of commodities, were up 28.29 percent, from \$243,846,000 to \$312,835,000.

FRUIT AND NUT CROPS: Total gross returns for all fruit and nut crops decreased \$20,268,000, from \$1,211,362,000 to \$1,191,094,000, in large a result of damage to citrus from freezing temperatures in December of 1998. The value of the orange crop fell 55.7 percent; down by \$69,563,000, from \$124,899,000 to \$55,336,000. Lemon production dropped 8.92 tons per acre decreasing the value of the crop by 79.85 percent. The price per ton of almonds decreased 45.83 percent, resulting in a crop value of \$7,658,000 less than in 1998, despite an increase of 10,157 acres. Apricot growers received \$29 per ton less than in 1998, however increases in acreage and yield resulted in an increased total crop value of \$9,110,000. Grapes, again the number one crop on the county's top ten list, were up 6.33 percent, from \$569,208,000 to \$605,214,000. The value of the peach crop increased by \$3,373,000; nectarines were up \$3,604,000 and plums increased in value \$4,144,000. The price paid to the grower for pears was up \$199 per ton.

NURSERY: All areas showed increases in value resulting in total gross returns that were up 10 percent, from \$32,530,600 to \$29,575,600. Christmas tree acreage nearly doubled and tree production increased 134.4 percent. The value of herbaceous ornamentals (potted plants, bedding plants and herbaceous perennials) increased \$711,000, while ornamental trees and shrubs were up \$351,000. The other category, which includes bareroot fruit trees, budwood, citrus trees, grape rootings and cuttings and vegetable plants, was up 9.12 percent, from \$20,377,000 to \$22,236,000.

LIVESTOCK AND POULTRY: The total gross returns for livestock and poultry increased by \$109,800,000, from \$570,209,000 to \$680,009,000. Poultry was second on the county's top ten crops list, with an increased value of 19.32 percent or \$84,719,000. Cattle and calves moved up from eighth to seventh place on the top ten list, increasing in total value by \$16,142,000 due to increased prices. The total value of hogs and pigs increased by 3.46 percent, from \$1,818,000 to \$1,881,000. Sheep and lambs decreased in total value by 10.08 percent or \$488,000, as a result of both lower number of head sold and a drop in the per unit price.

LIVESTOCK AND POULTRY PRODUCTS: The total gross returns for livestock and poultry products decreased by 2.55 percent or \$6,098,000. Manure production was up by 60,000 tons. Milk remained fifth on the county's top ten list despite a total value decrease of \$6,391,000. Eggs for commercial and hatching purposes increased 9.73 percent for a total value of \$4,983,000.

APIARY PRODUCTS AND POLLINATION SERVICES: Gross returns for apiary products and pollination services increased \$1,866,000, from \$9,008,000 to \$10,874,000. Honey increased in value \$122,000 and beeswax production was down 10,900 pounds. The total value of pollination services including alfalfa seed, cantaloupe, and fruit and nut acreage, increased by \$1,772,000, from \$7,910,000 to \$9,682,000.

INDUSTRIAL CROPS: Gross returns for industrial crops decreased by 5.77 percent to \$6,187,000. Timber production was down 2,217,000 board feet and the returns decreased \$239,000. This year's increase in firewood value resulted from a change in the method used to value the crop.

SUSTAINABLE AGRICULTURE

1999 BIOLOGICAL CONTROL ACTIVITIES

PEST	B.C. AGENT/MECHANISM	ACTIVITY
Yellow Starthistle (YST)	Hairy weevil (Eustenopus villosus sp.)	Released 2,600 specimens at various new sites. Most old sites showed good established populations that were spreading.
	Peacock fly (Chaetorellia sp.)	Specimens were not moved anywhere as the flies are spreading rapidly on their own.
	Seedhead fly (Urophora sirunaseva sp.)	Surveys showed that it is present in most of the YST areas and is expanding its range.
	Bud weevil (Bangasternus orientalis sp.)	Surveys showed that it is still present and expanding its range.

1999 DETECTION ACTIVITIES

INSECT	TRAPS DEPLOYED	RESULTS
Medfly	947	Seven sterile flies trapped
Mexican fruit fly	190	None captured
Oriental fruit fly	152	None captured
Melon fly	152	None captured
Gypsy moth	403	None captured
Japanese beetle	276	None captured
Olive fruit fly	649	None captured
Guava fruit fly	450	On June 22, 1999, a male was detected in Fresno. No more flies were found.

SUSTAINABLE AGRICULTURE

PEST ERADICATION

RED IMPORTED FIRE ANT: Two more positive finds were made in areas different from previous finds in Fresno County. One was in another almond orchard, but this time near San Joaquin. Two rows were infested on the east end of the orchard, which were treated but not totally eradicated in 1999. The second find was much more disturbing. A nursery in Fresno was found to have two mounds. They were eradicated and a subsequent survey around the site did not find any more.

SKELETONWEED: A total of 592 sites were surveyed four times from June through October. The sites total approximately 900 acres of which 8.5 acres were treated. Approximately five acres of 800 acres surveyed were treated with 61 ounces of the herbicide Transline. Another 3.5 acres of approximately 100 acres surveyed were treated with three gallons of the herbicide Roundup Pro. More skeletonweed was detected further to the east and south of the previously known sites. The new finds occurred too late in the season for an herbicide application. New locations will be surveyed and treated in the spring of 2000.

NEW AND UNUSUAL PEST OUTBREAKS IN 1999

RED GUM LERPPSYLLID (*Glycaspis brimblecombei*) was found here for the first time in June. By the time it was discovered, it was throughout the entire county. University of California will be releasing parasitoids in 2000.

VINE MEALY BUG (*Planococcus ficus*) was discovered in a few vineyards in the Fowler/Sanger area. It was a light infestation that was likely brought up from Imperial County on harvesting equipment. Despite treatment, by the end of the year it had spread to some neighboring vineyards.

GRASSHOPPERS were extremely bad in Fresno County this year. Both east and west foothill areas experienced major outbreaks and in some areas where agriculture was in close proximity to the hills, crops were damaged. Most complaints were from homeowners in the foothills.

1999 ORGANIC FARMING

Gross returns for organic farming in 1999 total \$17,349,000. A large variety of crops were produced in compliance with the California Organic Food Act of 1990. Sixty two farms totaling 6,804 acres and seventeen handlers (shippers/packers) were registered organic in Fresno county in 1999. Crops grown, packed, and shipped include almonds, apples, apricots, artichokes, asian pears, barley, beans, boysenberries, cauliflower, cherries, cotton, cucumbers, cut flowers, eggplant, figs, garlic, grapes, green beans, herbs, kiwifruit, lemons, lettuce, mandarins, melons, nectarines, nursery plants, okra, onions, oranges, potatoes, peaches, peppers, persimmons, pistachios, plums, pluots, pomegranates, radishes, raisins, safflower, salad mix, sheep, squash, tomatillos, tomatoes, turkeys, walnuts, and wheat.